COMPLIANCE / ENGINEERING / REMEDIATION

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March 6, 2008

Ms. Debbie Baldwin
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

RE: January 2008 Methane Seep Survey
Bondad, Colorado

Dear Ms. Baldwin:

LT Environmental, Inc. (LTE) is pleased to provide the Colorado Oil and Gas Conservation Commission (COGCC) with this letter summarizing the results of the 15th methane seep survey conducted on January 22, 2008 at the Bondad Gas Seep Site (Site) located in Bondad, Colorado. This is the sixth survey since drilling and re-completion activities were conducted at the Bryce 1-X (API #05-067-09087) well between late July 2006 and early August 2006.

BACKGROUND

At the request of the COGCC, LTE conducted an initial methane gas seep survey of the Site in response to an explosion of a residence located at 4034 US Highway 550 (the former Yoakum Residence). The results of the initial soil gas survey are presented in the *Methane Seep Survey Report* (March 2005). Additional soil gas surveys were performed on the following dates:

- April 19, 2005;
- June 10, 2005;
- November 1, 2005;
- December 2, 2005;
- January 30, 2006;
- April 6, 2006;
- June 28, 2006;
- August 28, 2006;
- September 21, 2006;
- December 13, 2006;
- April 20, 2007;
- July 20, 2007; and
- September 24, 2007.

All project reports are available on the COGCC website at www.oil-gas.state.co.us.

LTE conducted a geophysical survey of the seep area in April 2005 which identified several areas suspected of containing buried structures with the potential to act as conduits for methane gas. Exploratory excavation activities were conducted in these suspect areas in August 2005 and the abandoned Bryce 1-X (API #05-067-09087) well was uncovered in the main gas seep area. In November, 2005, LTE provided oversight during the excavation, inspection, and initial

remediation of the Bryce 1-X (API #05-067-09087) well and sandstone bedrock surface. Reports summarizing the geophysical survey, exploratory excavation activities, and the Bryce 1-X (API #05-067-09087) well remediation activities are also available on the COGCC website.

SITE DESCRIPTION

The Site is located in Bondad, Colorado, approximately 20 miles south of Durango, Colorado (Figure 1). The Site, located approximately 0.25 miles north of the confluence of the Animas River and the Florida River, consists of several tracts of land covering more than 100 acres. The surrounding land use consists of several residential properties, agricultural properties, a fire station, US Highway 550, the Animas River, to the west, and the Florida River, to the east. The majority of land in the area is privately owned.

METHANE GAS SEEP SURVEY

Methodology

On January 22, 2008, LTE was on site to conduct the 15th methane gas seep survey of the Site. The scope of the survey was similar to the previous surveys conducted at the Site. During the soil gas survey, tubing was lowered into each borehole and gas measurements were collected directly from the shallow surface soil approximately three feet below ground surface (bgs). LTE measured the concentration of methane, carbon monoxide, hydrogen sulfide, and oxygen at each sampling location.

LTE created a sampling grid to cover the mapping area systematically and to provide a means to delineate the extent of the gas seepage. LTE collected a soil gas measurement at the corners of each square in the grid. Each sample location was recorded using a Trimble GeoXT® global positioning system (GPS). When methane was detected along the edges of the grid, additional measurements were collected outside of the grid to define the extent of the seep area more completely.

LTE measured the methane concentration in the soil around the exterior of the three houses in the mapping area, and near the water wells associated with each of the structures. Carl Weston denied access to LTE to conduct this survey, therefore no survey was performed west of the Highway 550 right-of-way.

Soil Gas Survey Results

LTE personnel advanced a total of 62 subsurface probes across the project area. Results of this survey indicate that methane gas was not detected at any of the measurement locations. To ensure that equipment was working properly, the gas meter was tested three times during the survey with a known concentration of methane. The gas meter was functioning properly at the time of the soil gas survey.

Methane was not detected around the Bandy, Buddhue, or Meschke residences or near the water wells associated with these structures. Methane was not detected in the vicinity of the Cain 31-2 (API #05-067-08114) coal bed methane (CBM) gas well during this January 2008 survey. Figure 1 shows the methane concentrations results recorded during the January 2008 methane seep survey.

Methane Seep Survey Comparison

Fewer gas measurements were collected during the January 2008 survey than during previous surveys. The decrease in the number of gas measurements collected is the result of the fact that fewer measurements were needed to confirm that gas seepage at the ground surface is no longer occurring and access restrictions imposed by Carl Weston.

LTE prepared a map illustrating the historical areal extent of methane seepage identified during previous gas survey events on a semi-annual basis (Figure 2). Comparison of the January 2008 data indicates that the primary seep area (near the abandoned Bryce 1-X (API #05-067-09087) well) is no longer present.

The table below presents the number of points reporting detectable concentrations of methane; the average methane concentrations; and the estimated size of the primary seep area during each of the previous soil gas survey events.

Table 1. Primary Seep Area Size Comparison

Survey Date	Number of Survey Points With Methane	Estimated Seep Area (acres)	Average Subsurface Methane Concentration (%)
Feb-05	112	10.3	23
Apr-05	45	10.6	33
Jun-05	37	8.1	21
Nov-05	45	8.8	32
Dec-05	25	5.7	21
Jan-06	31	7.3	10
Apr-06	32	7.7	29
Jun-06	23	5.7	25
Aug-06	13	2.7	2
Sep-06	13	2.4	3
Dec-06	10	2.2	0.63
Apr-07	14	3.1	0.96
Jul-07	1	0.08	1
Sep-07	0	0.0	0.0
Jan-08	0	0.0	0.0

CONCLUSIONS AND RECOMMENDATIONS

Results of the September 2007 and January 2008 surveys indicate that methane seepage at the ground surface appears to have stopped. Continued monitoring of the seepage at the site is recommended to determine if the complete lack of seepage observed in September 2007 and January 2008 is related to seasonal changes or if the gas that was trapped beneath the sandstone layer at the site has completely dissipated.

The primary methane seep appears to have been caused by gas migrating from the Fruitland Formation up the well bore of the Bryce 1-X (API #05-067-09087) well. The gas moved vertically upward along the well bore and then migrated laterally into permeable layers and aquifers of the Nacimiento Formation where well casing was absent and/or structurally compromised. It appears that the plugging of the Bryce 1-X (API #05-067-09087) has eliminated the gas seepage at the ground surface. LTE recommends continued monitoring of the methane seep at the Site as a safety precaution for the residents in the area and to monitor the effectiveness of the plugging activities. The next soil gas survey event is scheduled for April 2008.

The methane detectors appear to be functioning according to manufacturer's specifications. Further monitoring and maintenance of these residential units is no longer needed. Monitoring and maintenance of the Scott brand detector in the fire station will be performed by fire department personnel.

Frost-proof hydrants were installed at the fire station, Buddhue, and Meschke water wells in December 2007. Additionally, LTE contracted Horizon Environmental Services, Inc. of Aztec, New Mexico to conduct reclamation work in the vicinity of the Bryce 1-X in December 2007. Native seed was placed on the abandoned well pad using a disking technique and hay mulch was used to hold the seed in place and conserve moisture throughout the winter.

LTE appreciates the opportunity to provide environmental services to the COGCC. If you have any questions regarding this report or would like additional information, please contact us at (303) 433-9788 or (970) 884-5215.

Sincerely,

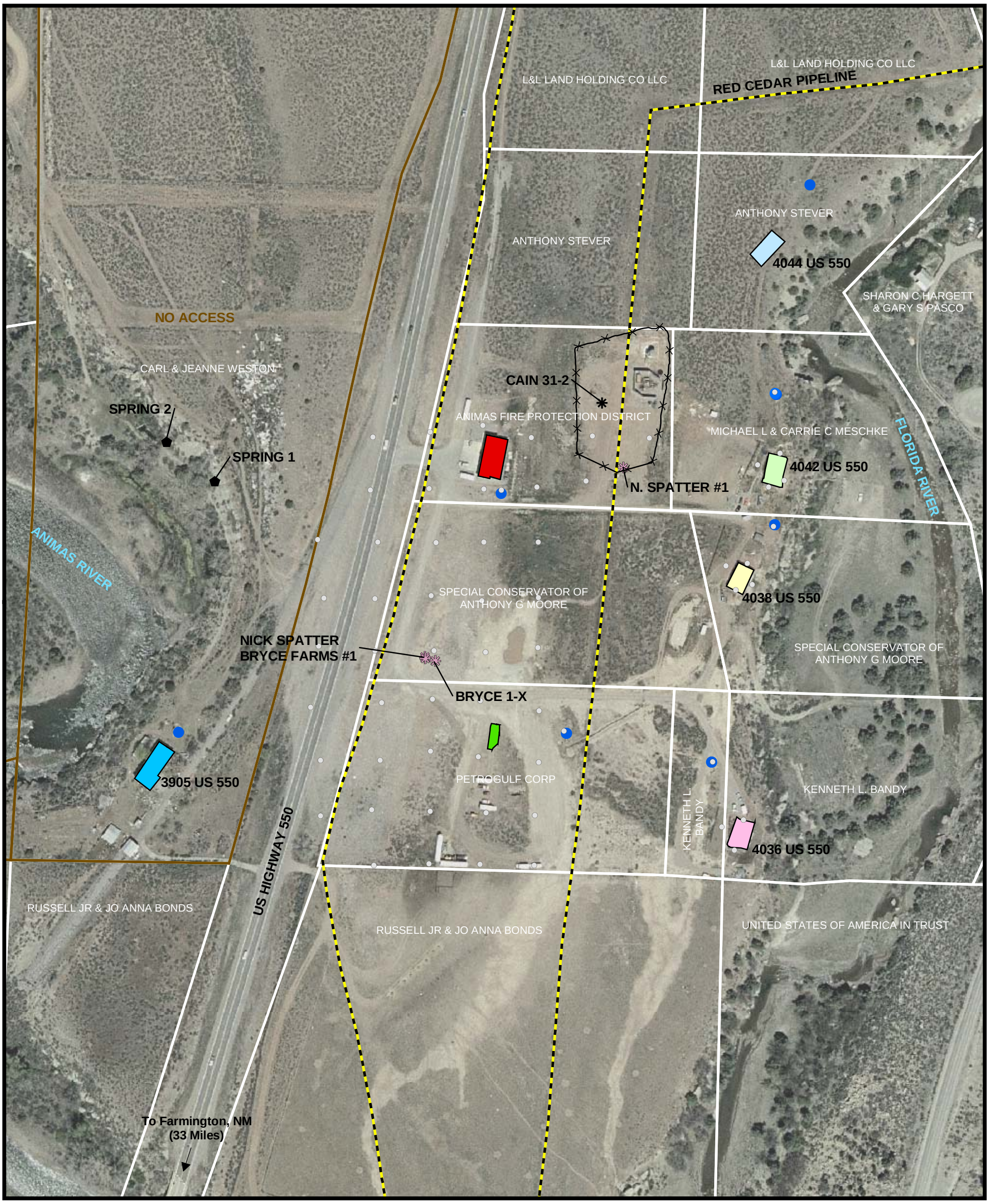
LT ENVIRONMENTAL, INC.

Kyle G. Siesser
Project Geologist

John D. Peterson, P.G.
Project Manager

Attachments

FIGURES



LEGEND

- Water Supply Well
- Springs
- Gas Well
- Former Oil and Gas Well

Utilities

- Buried Gas Pipeline
- No Access

Structures

- Williams Residence
- Fire Station
- Meschke (former Wilson) Residence
- Buddhue Residence
- Bandy (former Grant) Residence
- Former Yoakum Residence
- Weston Residence

Subsurface Methane Measurements

- 0
- 500 ppm - 5%
- 6% - 15%
- 16% - 25%
- 26% - 50%
- 51% - 75%
- 75% - 100%

0 180 360
Feet

N

Landowner and Property Boundaries Labeled in White

FIGURE 1
SUBSURFACE METHANE MEASUREMENTS
JANUARY 2008
BONDAD GAS SEEP
BONDAD, CO
COLORADO OIL AND GAS CONSERVATION COMMISSION

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L&L LAND HOLDING CO LLC
L&L LAND HOLDING CO LLC
ANTHONY STEVER
ANTHONY STEVER
4044 US 550
SHARON C HARGETT & GARY S PASCO
NO ACCESS
CARL & JEANNE WESTON
SPRING 2
SPRING 1
CAIN 31-2
ANIMAS FIRE PROTECTION DISTRICT
MICHAEL L & CARRIE C MESCHKE
4042 US 550
N. SPATTER #1
FLORIDA RIVER
ANIMAS RIVER
SPECIAL CONSERVATOR OF ANTHONY G MOORE
4038 US 550
SPECIAL CONSERVATOR OF ANTHONY G MOORE
NICK SPATTER BRYCE FARMS #1
BRYCE 1-X
3905 US 550
PETROGULF CORP
KENNETH L BANDY
KENNETH L BANDY
4036 US 550
US HIGHWAY 550
RUSSELL JR & JO ANNA BONDS
RUSSELL JR & JO ANNA BONDS
UNITED STATES OF AMERICA IN TRUST
To Farmington, NM (33 Miles)

LEGEND

Extent of Methane Seepage

- January 2008 - No Seep Detected
- September 2007 - No Seep Detected
- July 2007
- April 2007
- September 2006
- April 2006
- November 2005
- April 2005
- Water Supply Well
- Springs
- Gas Well
- Former Oil and Gas Well
- No Access

Landowner and Property Boundaries Labeled in White

Structures

- Williams Residence
- Fire Station
- Meschke (former Wilson) Residence
- Buddhue Residence
- Bandy (former Grant) Residence
- Former Yoakum Residence
- Weston Residence

0 180 360
Feet

N

FIGURE 2
HISTORICAL SUBSURFACE METHANE MEASUREMENTS
APRIL 2005 - JANUARY 2008
BONDAD GAS SEEP
BONDAD, CO
COLORADO OIL AND GAS CONSERVATION COMMISSION

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